RESEARCH

MANITOBA
DEPARTMENT OF EDUCATION

AN EVALUATION OF THE FIRST TWO YEARS OF THE ENGLISH-UKRAINIAN BILINGUAL PROGRAM: SUMMARY REPORT

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AN EVALUATION OF THE FIRST TWO YEARS OF THE ENGLISH-UKRAINIAN BILINGUAL PROGRAM: SUMMARY REPORT

Authorized for Release
by

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Research Branch
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ACKNOWLEDGEMENTS

The Research Branch has completed an evaluation of the first two years of the English-Ukrainian Bilingual Program for the Program Development Directorate of the Department of Education. The evaluation included: an assessment of students' skills in both the Ukrainian and English languages; an assessment of students' progress in the elementary school program overall; measurement of attitudes toward the program among parents, teachers, and principals who were involved directly in the program; an evaluation of the perceptions of superintendents; and, the development of a model for assessing costs of the program.

This summary report outlines the findings of the evaluation to date, and provides information relevant to the concerns of those individuals interested in the program.

The research team responsible for conducting this study, Erma Chapman (Project Leader), Dan Haughey, Susan Weeda, and myself, wish to express our appreciation to the numerous people who assisted at various stages throughout this study.

In particular, we wish to thank the students, parents, teachers, principals and superintendents whose co-operation and assistance enabled the study to be conducted. Their support and co-operation were vital to the completion of the evaluation.

The Research team would also like to thank the Manitoba Parents for Ukrainian Education, especially Terry Prychitko and Myron Spolsky, for their assistance with the questionnaire which was distributed to parents. Finally, appreciation is extended to Stephania Yurkiwsky and Karl Fast of the Department of Education, Program Development Directorate, for their assistance at various stages of the evaluation.

M.P. Yakimishyn
Director of Research

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I. INTRODUCTION

In September, 1979, an English-Ukrainian Bilingual Program was implemented on a pilot basis in one Grade One class in each of three school divisions in Manitoba. Funding for pilot classes was provided by the provincial Department of Education. Over and above the three pilot classes, the Minister of Education, Hon. Keith A. Cosens, also approved a number of classes established through local initiative in three additional school divisions in September 1979 and 1980. These classes were funded by the divisions in which they were instituted. The English-Ukrainian Bilingual Program could be implemented, within the guidelines, to the extent desired by the local school board.

The bilingual program, a three year pilot program based on the Manitoba curriculum, uses Ukrainian as the language of instruction for approximately 50 per cent of instructional time in Grades One through Three. For those students in Kindergarten, all instructional time is conducted in Ukrainian, except in cases where the teacher considers it necessary to modify this arrangement to ensure the students' development of English language arts.

In order to meet the needs of the Program Development Directorate in planning for the future of the program, the Research Branch was requested to determine the degree to which program objectives had been achieved. Although the additional classes were financed locally, they were comparable in all other respects to pilot classes, and, therefore, were included in the evaluation.

The questions which were addressed in the evaluation are presented in Section II of this summary. In Section III, definitions of terms used in the report and a brief outline of the research methods employed are presented. Findings of the evaluation can be found in Section IV, and conclusions in Section V.

II. THE QUESTIONS

The research questions addressed in the summary report were as follows:

1. To what extent have students in Kindergarten, Grade One, and Grade Two acquired skills in:
   (a) Ukrainian language arts;
   (b) English language arts; and,
   (c) the primary school program as a whole?
2. To what extent have students acquired an awareness of Ukrainian cultural heritage in Canada?
3. What are the attitudes of parents, teachers, principals, and superintendents toward the English-Ukrainian Bilingual Program?

III. DEFINITIONS AND METHODS

Definitions

For the purposes of the summary report, the following definitions apply:

Bilingual Program Students - refers to students who were enrolled in the English-Ukrainian Bilingual Program.

Regular Program Students - refers to students who were enrolled in English unilingual classes and were selected by principals to serve as a comparison group in the assessment of skill development.

Significant - refers to the nature of the outcome of statistical tests performed on skill assessments. "Significant" refers to the probability that any differences in scores on skill tests between bilingual and regular program students were due to the bilingual program, rather than due to a chance occurrence.

Ukrainian Language Tests - refer to assessment tests of skill development in the Ukrainian language, as developed by the Edmonton Public School Board, and adapted for use in Manitoba.

Methods

In order to assess the development of Ukrainian language skills, the Ukrainian language consultant for the Department of Education administered the Ukrainian

Language Tests to each child in the bilingual program during either May or June of 1981. English language skills were assessed among bilingual and regular program students using a variety of commercial tests.[1] Teachers in each classroom administered the English achievement tests at the end of each school year. In addition to the tests of Ukrainian and English languages, teachers were asked to report either "satisfactory" or "unsatisfactory" progress for the primary school subjects of arithmetic, language arts, and science and social studies for students in either the bilingual or regular program. Scores of students in the bilingual program on English language arts tests and the overall primary program were compared to scores of students in their school who were in the regular program.

Parents, teachers, and principals completed questionnaires which were developed by Research Branch personnel, in conjunction with staff from Program Development. Representatives from the Manitoba Parents for Ukrainian Education association provided useful comments in the development of the questionnaire which was sent to parents. Questionnaires were designed to assess attitudes toward the program, and to evaluate perceptions of children's awareness of the Ukrainian cultural heritage in Canada. Interviews were conducted with the school superintendents in the six divisions where the program had been implemented.

Analysis

Several statistical tools which were appropriate for the evaluation of skill assessment results were employed. Within the summary report, average scores are presented. When differences in average scores of bilingual and regular program students existed, the significance of these according to statistical analyses have been indicated.

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[1] The tests which were employed included: Metropolitan Readiness Test; Metropolitan Achievement Test - Primer Level; Metropolitan Achievement Test - Primary I Level; Metropolitan Achievement Test - Primary II Level; and, Gates-MacGinitie Reading Readiness Test.

IV. THE FINDINGS

The findings of the evaluation are presented in the same order as the questions which are listed in Section II of the summary report.

A. Skill Assessment

1. Ukrainian Language

A variety of language skills were assessed. The average scores, for each skill which was assessed, for students who were in Kindergarten, Grade One, and Grade Two during 1980/81 are presented respectively in Figures 1 to 3. The assessment consisted of four (Kindergarten and Grade One) or five (Grade Two) subtests. The "Vocabulary Identification" subtest was designed for group administration. Students were given a set of pictures for each question, and were required to circle the picture which matched the word read by the teacher/test administrator. The remaining subtests were administered on an individual basis. For the "Oral Vocabulary" subtest, children were presented with pictures, and asked for the correct Ukrainian name. On the "Directions" subtest, students were required to follow directions which were presented in Ukrainian. For the "Comprehension" subtest, children were presented with a picture, asked questions concerning the picture in Ukrainian, and required to reply in Ukrainian. On the "Reading Comprehension" subtest, children read a short written passage in Ukrainian, and replied to questions about the passage in English.

Except for one class of children in Grade One who had attended a Ukrainian Kindergarten, scores for children in Kindergarten and Grade One represent the amount of Ukrainian learned following one year of instruction in the language. As can be seen from Figures 1 and 2 for students in Kindergarten and Grade One, respectively, the average scores for identifying Ukrainian words and following directions in Ukrainian, were at least 70 per cent after one year of Ukrainian. Children did not perform as well on the

tests in which they were asked to speak Ukrainian (oral vocabulary and comprehension) after only one year of Ukrainian.

FIGURE 1

AVERAGE SCORES ON UKRAINIAN LANGUAGE TESTS IN KINDERGARTEN (42 CHILDREN)

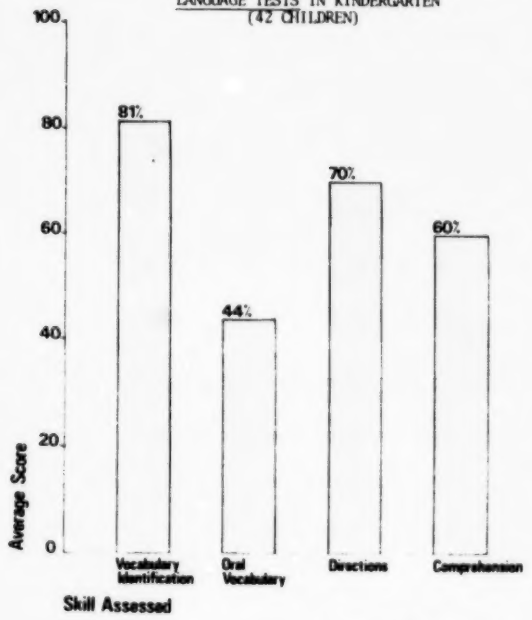
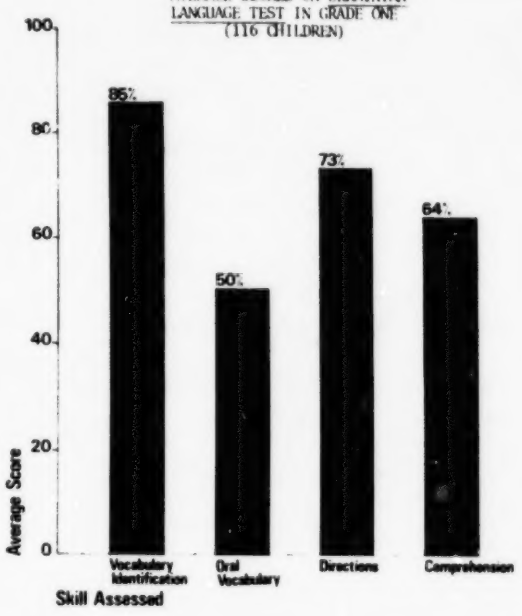


FIGURE 2

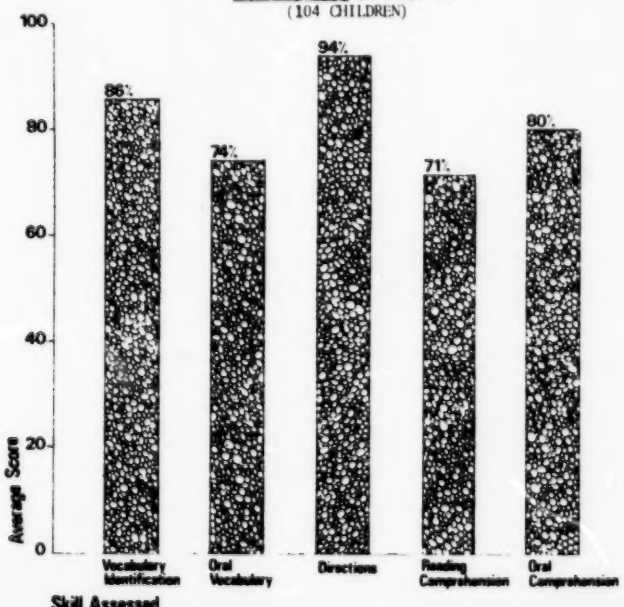
AVERAGE SCORES ON UKRAINIAN LANGUAGE TEST IN GRADE ONE (116 CHILDREN)



A more difficult test of Ukrainian language skills was administered to children who were in Grade Two. The test results indicated (Figure 3) that after two years of instruction in Ukrainian the students had average scores above 70 per cent, not only in understanding spoken Ukrainian, but also in speaking and reading Ukrainian.

FIGURE 3

AVERAGE SCORES ON UKRAINIAN LANGUAGE TEST IN GRADE TWO (104 CHILDREN)



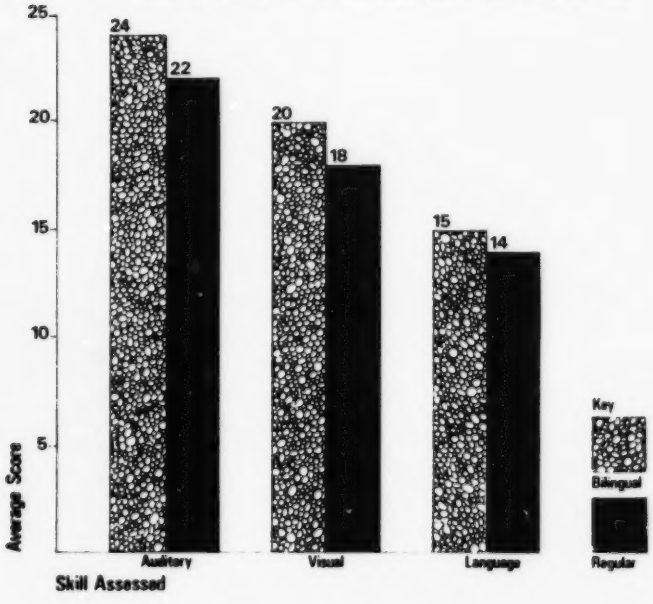
2. English Language

Because of the variety of tests which were used by the schools, results of English language skills assessment could not be presented simply by grade level. Consequently, the results for each of the skills are presented in Figures 4 to 8, according to the type of test instrument employed.

Average scores on the Metropolitan Readiness Test were assessed in Kindergarten, before students were enrolled in the bilingual program (Figure 4). None of the differences which were apparent between the students who subsequently entered either the bilingual or regular program were significant when submitted to statistical analyses.

FIGURE 4

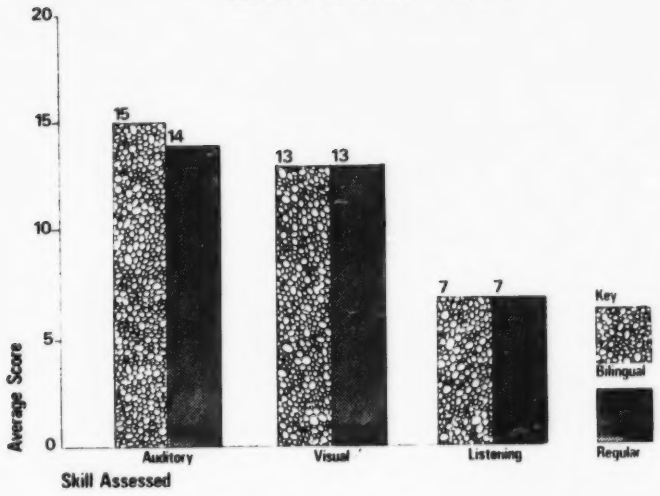
AVERAGE SCORES ON THE METROPOLITAN READINESS TEST PRIOR TO ENROLLMENT IN THE BILINGUAL OR REGULAR PROGRAM



Average scores on the Gates-MacGinitie Test (Figure 5) were assessed on a group of students who attended a Ukrainian Kindergarten, and on a group of students who attended a regular Kindergarten. The difference between groups of students on the Auditory skill test was not statistically significant. As can be seen in Figure 5, no differences were found on the Visual and Listening tests.

FIGURE 5

AVERAGE SCORES ON THE GATES-MACGINITIE READINESS TEST FOR STUDENTS ATTENDING A UKRAINIAN AND REGULAR KINDERGARTEN



Students' English skills were assessed in Grade One using either the Primer (Figure 6) or Primary I (Figure 7) Level of the Metropolitan Achievement Test. Although differences between scores of students in the bilingual and regular programs are apparent in the graphs, none of the differences was significant statistically.

FIGURE 6

AVERAGE SCORES ON THE METROPOLITAN ACHIEVEMENT TEST, PRIMER LEVEL FOR STUDENTS IN THE BILINGUAL AND REGULAR PROGRAMS

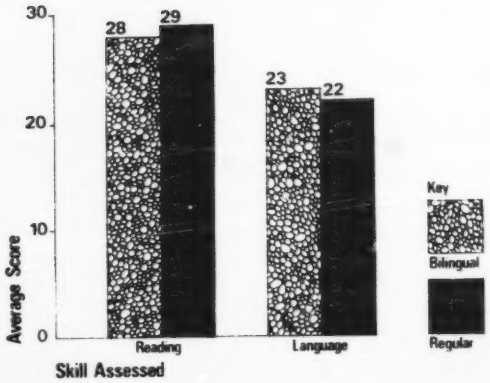
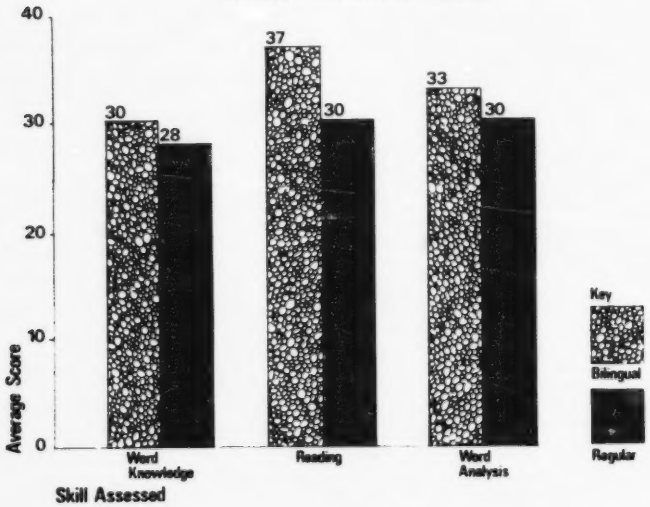


FIGURE 7

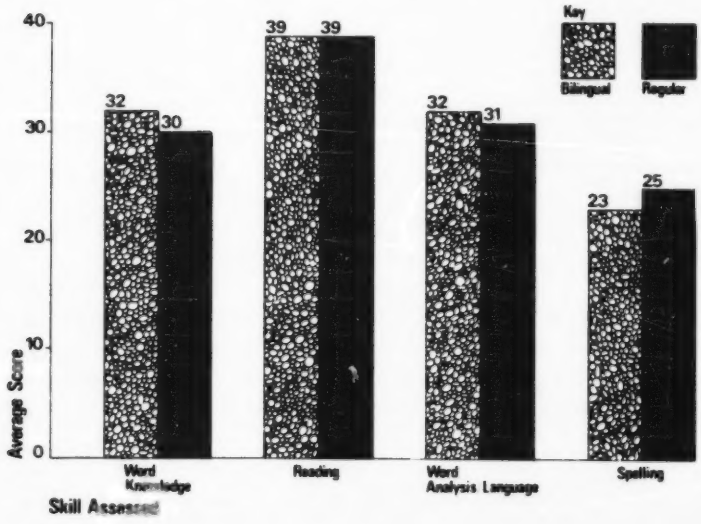
AVERAGE SCORES ON THE METROPOLITAN ACHIEVEMENT TEST, PRIMARY I LEVEL FOR STUDENTS IN THE BILINGUAL AND REGULAR PROGRAMS



The Primary II level of the Metropolitan Achievement Test was employed to measure English language skills of bilingual and regular program students in Grade Two (Figure 8). Differences in average scores on the Word Knowledge, Word Analysis/Language, and Spelling tests between the two groups of students were not significant.

FIGURE 8

AVERAGE SCORES ON THE METROPOLITAN ACHIEVEMENT TEST, PRIMARY II LEVEL FOR STUDENTS IN THE BILINGUAL AND REGULAR PROGRAMS

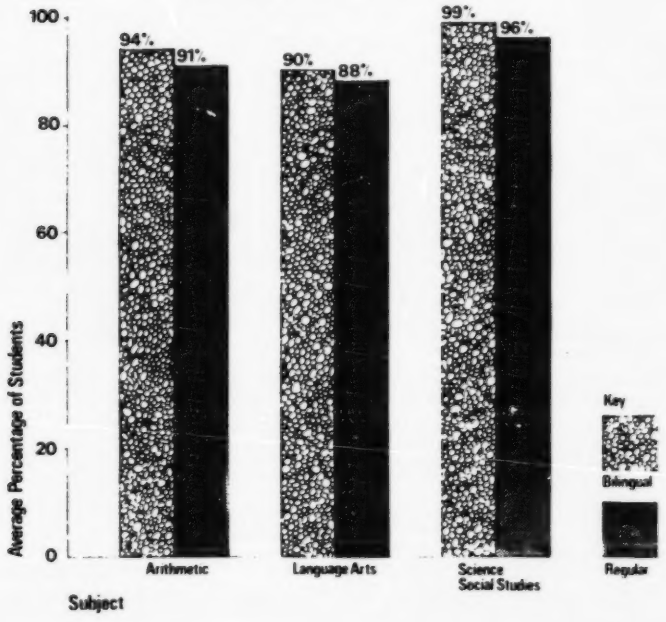


3. Primary Program Subjects

The percentage of students in both programs, whom teachers reported were progressing satisfactorily in the primary program subjects of arithmetic, language arts, and science and social studies, are presented in Figure 9. Because of the similarity in scores, results were collapsed across Grades One and Two. Apparent differences were not significant.

FIGURE 9

AVERAGE PERCENTAGES OF STUDENTS PERFORMING "SATISFACTORILY" BY SUBJECT AREA AND PROGRAM



B. Awareness of Ukrainian Cultural Heritage

Parents and teachers were asked whether they thought that their child or students had developed a greater awareness of the Ukrainian cultural heritage in Canada since enrolling in the program. Ninety-eight per cent of the parents and all of the teachers replied positively.

C. Attitudes of Parents, Teachers, and Principals

Because different questions were asked of parents, teachers, and principals, findings are presented separately for each group of respondents.

1. Parents

Questionnaires were distributed to 253 parents, and 203 completed forms were returned to the Research Branch. That is, 80 per cent of those parents who had a child enrolled in the bilingual program responded to the questionnaire.

Eighty-eight per cent of the parental respondents reported that their child was of Ukrainian descent. In addition, Ukrainian was spoken at least half of the time in 23 per cent of the respondents' homes. Seventy-six per cent of the respondents' children regularly interacted with Ukrainian-speaking people.

Most of the parents reported that they were "very satisfied" with: the English-Ukrainian Bilingual Program (83%); their child's development of English language skills (80%); and, their child's development of Ukrainian language skills (85%).

Parents who were of Ukrainian descent were more likely to enroll their child in the bilingual program in order for the child to learn the Ukrainian language (88%) or to learn about Ukrainian culture (64%). In contrast, parents who were not of Ukrainian descent were more likely to enroll their child in the bilingual program in order for the child to learn another language (81%).

Most parents (91%) would continue to enroll their child in the English-Ukrainian Bilingual Program if the program were extended to Grades Four to Six. In addition, many parents would recommend the program to others (92%). Ninety-five per cent of parents with pre-school children reported that they would enroll their children in the bilingual program.

Approximately 60 per cent of parents were satisfied, to some degree, with the availability of Ukrainian materials, such as storybooks and records, for their child.

Some parents reported that their child had become more enthusiastic about learning other languages (60%) and about other cultures (45%) since being enrolled in the bilingual program. Almost all parents (98%) reported that they saw benefits in the program for their child; some parents (14%) reported that they saw drawbacks in the program for their child. In addition, 97 per cent of parents reported that they would like to see the English-Ukrainian Bilingual Program extended to Grades Four to Six.

2. Teachers

All of the teachers (13) involved in the bilingual program responded to the questionnaire.

Most of the teachers were "very satisfied" with: the English-Ukrainian Bilingual Program (11 of 13)[3]; their students' development of English language skills (9 of 13); and, their students' development of Ukrainian language skills (9 of 11).

In general, bilingual program teachers felt integrated with other teachers in the school (12 of 13). All of the teachers were satisfied with their level of integration with other teachers.

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[3] This indicates that 11 of the 13 teachers responded that they were "very satisfied".

Teachers of Grade One and Two classes reported that they used Ukrainian as the language of instruction for 41 to 50 per cent of the school day. Kindergarten teachers reported that they instructed in Ukrainian for about 70 per cent of the day. A majority of the bilingual teachers reported that they spent two thirds or more of their preparation time on the Ukrainian portion of their program (5 of 8).

August and September inservices were attended by a majority of Ukrainian teachers (7 of 11), who generally found them to be helpful. Curriculum committee meetings were considered "very helpful" by six of the eight teachers who participated.

Although teachers generally were satisfied with curriculum materials available (10 of 11), a majority of teachers reported that support materials were inadequate (8 of 11).

All teachers reported that they saw benefits in the program for their students; about half of the teachers (6 of 13) reported that they saw drawbacks in the program for their students. All of the teachers thought that the bilingual program should be extended to Grades Four to Six. Teachers' most common concern, if the program were extended, was related to the availability of materials (7 of 13).

3. Principals

All of the principals (8) responded to the questionnaire. Most of the principals stated that they were "very satisfied" with the program (7 of 8). All of them reported that students benefitted from the bilingual program; a few (2 of 8) felt that the program did contain drawbacks for the students.

The majority of principals (6 of 8) were satisfied with the financial support they had received, and all were satisfied with the non-financial support they had received, especially from parents.

Principals reported that they had no major difficulties in the administrative areas of: transportation; level of integration of staff and students in the bilingual program with the remainder of the school population; lunch hour arrangements; scheduling; accounting; public relations; parents' demands; or, remedial resources. Half of the eight principals were dissatisfied with the current availability of Ukrainian language materials, and saw availability as a major concern, if the bilingual program were extended.

Staffing was an area of concern to seven of the eight principals, especially if the program were either expanded to more classes or extended to Grades Four to Six. Lack of teachers who are fluent in the Ukrainian language was the main focus of their concern.

All eight of the principals felt that the English-Ukrainian Bilingual Program was successful and that it should be extended to Grades Four to Six.

D. Perceptions of Superintendents

Information about various aspects of the program, obtained through interviewing of all six superintendents involved in the program, is presented in the following summary form:

1. Policy

School boards are in the process of refining policies to reflect public interest and demand for second language instruction. This need for refinement will be accelerated if the program is extended to Grades Four to Six.

2. Costs

A majority of superintendents, (4 of 6), perceived the Program to cost more than the conventional Kindergarten to Grade Three program. This additional cost for the program was attributed to factors including: more expensive instructional materials; transportation; support staff; and, additional staffing costs. Of the above factors, the additional staffing cost appeared to be the most critical factor.

3. Personnel

Each of the superintendents interviewed stated that the teachers involved in the program were "excellent". These teachers were praised for their commitment, performance, endurance, and excellent teaching. The general viewpoint was that the success of the Program can be attributed to the quality of teaching and the teacher commitment to the program.

However, superintendents indicated that staff recruitment could pose a problem as the program expands. Some divisions are, in fact, currently experiencing problems recruiting staff. These problems include recruitment of full-time, part-time and substitute staff.

4. Public Relations

At each of the schools where the program was offered, parent committees had been active in addressing the public relations task. It was reported that, in each of these cases, the leadership provided by the parent group was carried out in co-operation with the school division. The parent committees conducted public relations campaigns through "mall displays", local T.V., special school events, media advertising and school-centred activities. Superintendents perceived public relations to be a joint venture with the parent committees.

5. Parent Committees

Parent committees play a important role in terms of financial support and public information. The parent committees function very positively and co-operatively with the boards. They do not function as pressure groups, but rather as facilitating groups.

6. Program Extension

All superintendents supported extension of the program to the end of Grade Six. Reasons cited in support of the extension included: "very positive parent reaction"; "need for strong language base in the division"; "success of the program"; and, "obligation to provide the students with at least six years of language exposure in order to develop language fluency".

V. THE CONCLUSIONS

Conclusions are listed in order of the questions to be answered by the evaluation.

1. (a) After one year of instruction in the Ukrainian language, children scored 70 per cent or above, on average, on tests of understanding spoken Ukrainian. Following two years of instruction, children scored 70 per cent or above, on average, on tests of understanding, speaking, and reading Ukrainian.

   (b) Students in the bilingual program did at least as well as their counterparts in the regular program on tests of English language arts.

   (c) Students in the English-Ukrainian Bilingual Program did at least as well as their counterparts in the regular program in each subject area within the overall primary school program.

2. On the basis of opinions expressed by parents and teachers, it can be concluded that students in the English-Ukrainian Bilingual Program are acquiring an awareness of the Ukrainian cultural heritage in Canada through their participation in the program.

3. It was concluded that parents, teachers, principals, and superintendents had positive attitudes toward the English-Ukrainian Bilingual Program. Moreover, it was concluded that parents, teachers, and administrators want to see the program extended to the end of Grade Six.

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AN EVALUATION OF THE
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FINAL REPORT

AN EVALUATION OF THE ENGLISH-UKRAINIAN BILINGUAL PROGRAM: FINAL REPORT

Prepared for:

S.A.I. Bullock, Director - Program Development
Department of Education
Release to be authorized by the above.

Prepared by:
Dr. Erma Chapman
February, 1982

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The author of this report, Erma Chapman, would like to express her gratitude to the teachers and principals involved in the assessment of English and Ukrainian language skills for their co-operation and assistance. Appreciation is extended to Stephania Yurkiwsky, Program Development Directorate, for her assistance in supplying Ukrainian achievement data.

Thanks are extended to the Management Information Services Branch for assistance in the data analysis phase of the study. Thanks also are extended to members of the Research Branch for their assistance in scoring English language tests and their comments in regard to the draft report. Vickie Mundle is recognized for her assistance in typing numerous drafts.

M.P. Yakimishyn
Director of Research

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I. INTRODUCTION

Within the province of Manitoba, 10 schools have classes which are participating in an English-Ukrainian Bilingual Program (hereafter, referred to as the Program). Under this Program, which was instituted in September, 1979, instruction is provided in English for 50 per cent of the day and in Ukrainian for the remainder of the day for participating students in Grades One through Three. For those students in Kindergarten, all instructional time is to be conducted in Ukrainian, except in cases in which the teacher is concerned about the class' development of English language arts.

In order to meet the needs of the Program Development Branch, and to facilitate the decision of whether to extend the Program, the Research Branch was requested on December 15, 1980 to conduct an assessment designed to determine whether the Program objectives had been achieved.

The research objectives of the study were as follows:

Objective 1: To determine the extent to which students at each grade level were acquiring skills in Ukrainian Language Arts, English Language Arts, and the overall primary program;

Objective 2: To determine the extent to which students were acquiring an awareness of Ukrainian cultural heritage;

Objective 3: To determine the attitudes of students, parents, teachers and administrators towards the English-Ukrainian Bilingual Program;

Objective 4: To determine the additional costs of offering the English-Ukrainian Bilingual Program; and,

Objective 5: To identify aspects of program implementation.

All of the research objectives have been addressed in the report "An Evaluation of the First Two Years of the English-Ukrainian Bilingual Program: Interim Report", July, 1981. Since skill development at the time of the interim report was measured only until the end of Grade Two, and due to the limitations associated with the initial skill assessment, evaluation of Ukrainian and English language skills was repeated during the 1981-82 school year. Therefore, evaluation of language skills is the focus of this final report.

II. METHODOLOGY

1. Operational Definitions

For the purpose of the interim report and this final report, the following definitions apply:

Program students - refers to students who were enrolled in the English-Ukrainian Bilingual Program.

Control students - refers to students who were enrolled in English unilingual classes and were selected by principals to serve as control subjects in the assessment of skill development.

Significant (or statistically significant) - refers to the probability that differences between groups were due to the Program, as opposed to a chance occurrence.

Ukrainian Language Tests - refer to assessment tests of skill development in the Ukrainian language, as developed by Edmonton Public School Board, and adapted for use in Manitoba.

2. Limitations

While reading this report, it is important to keep in mind the limitations inherent in the study. Due to the nature of the sample, the findings reflect student achievement within Manitoba's English-Ukrainian Bilingual Program and the control sample. Therefore, any conclusions drawn from the sample may not be generalized beyond the Manitoba Program.

Second, complete subtest results were not available for all students due to absences during the testing periods. Although only a few scores were unavailable, the absence of these scores, and the potential impact of such missing data, should be recognized.

Third, selection of control group students for the assessment of English language skills was made by the principal in each school. Moreover, results were not always available for students in the Program and a comparative group of students in the regular program within the same school. At another school in which English language development was assessed, different English language programs were conducted between Program and control classrooms of students. Thus, as a result of the above factors, the Program and control groups may have differed slightly in their English language learning experiences.

Fourth, some schools decided not to administer the complete Grade Three English language achievement battery. Since the decision applied to Program and control classes equally, the two samples were probably not biased by the decision. However, the smaller sample sizes for some of the English language skills may have resulted in less reliable results for the subtests in question.

Fifth, Ukrainian language testing occurred over a period of approximately two months. Thus, average achievement scores as reported in the results section may not be representative of the performance of students tested at the beginning or end of the two month period.

3. Instrumentation

Skill assessment of Ukrainian language arts development was conducted using Ukrainian Language Tests, as developed by the Edmonton Public School Board and modified by the Ukrainian Language Consultant to ensure consistency with the suggested Manitoba curriculum.

Among those students currently enrolled in Grade One, in the Program and control classes, skill assessment of English language arts development was conducted using the Metropolitan Achievement Test - Primer Level (MAT). Among those students currently enrolled in Grade Three, Canadian Tests of Basic Skills - Level 9 (CTBS) was employed.

4. Sample Selection and Response Rates

The sample for the assessment of Ukrainian language arts development consisted of all children in Grades One and Three of the Program[1] in the 1981/82 school year, excepting those students who attended Kindergarten in the Program during the 1980/81 school year. Thus, all students tested in Grade One were in their first year of the Program. Ukrainian Language Tests scores were collected on a total of 86 students in Grade One and 85 students in Grade Three.

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[1] In order to minimize disruption of classroom activities, only those students in the first and final years of the present Program were tested.

The sample for the assessment of English language arts development consisted of all students in Grades One and Three who were enrolled in the Program in the 1981/82 school year. As well, a control class of students in the regular program was chosen from each school participating in the skill assessment, except for the one school which did not have a regular program class at the Grade One level.

MAT scores were collected on a total of 292 students: 131 Program students and 161 control group students. CTBS scores were collected on a total of 193 students: 88 Program students and 105 control group students. Because a number of schools did not administer all of the CTBS subtests, the number of students who wrote each subtest are presented in Appendix A. Fewer students wrote the capitalization, punctuation, and language use subtests than wrote the vocabulary, reading and spelling subtests.

5. Field Methods

Ukrainian Language Tests were administered by the Ukrainian language consultant during the first two weeks of December, 1981 and first three weeks of January, 1982. Tests were scored by the language consultant, and the results for each student were forwarded to the Research Branch. Identification numbers, rather than students' names, were used during data analysis in order to maintain confidentiality.

MAT and CTBS tests were administered by either the classroom or resource teacher within each school during the first two weeks of December, 1981 and were sent to the Research Branch for scoring. In order that confidentiality could be retained during data analysis, only school and sample (Program or control) identification numbers were assigned to students' scores. Graded tests were returned to the appropriate schools.

III. RESULTS

1. Ukrainian Language Development

   A. Grade One Level

      Raw scores for each Ukrainian test were converted to percentage correct scores (Table 1). Students averaged 74% correct on vocabulary identification, 28% correct on oral vocabulary, 43% correct on directions, and 32% correct on comprehension.

   B. Grade Three Level

      Raw scores were converted to percentage correct scores for each Ukrainian test (Table 2). Students' average scores were 63% correct for comprehension and identification, 62% correct for reading, 34% correct for writing, and 74% correct for oral skills.

2. English Language Development

   A. Grade One Level

      Raw scores of student performance were analyzed for reading and language skills as measured by the MAT.[2] Average scores of students in the Program and control classes are presented in Table 3 for each skill. For both subtests, students in the control classrooms had significantly higher scores than students in the Program classrooms.

   B. Grade Three Level

      Raw scores of student performance were analyzed for vocabulary, reading, spelling, capitalization, punctuation, and language use as measured by the CTBS. Average scores of students in the Program and control classes are presented in Table 4 for each skill. Students in the Program had significantly better scores on the punctuation subtest than students in the control group. No other differences between scores on subtests were statistically significant.

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[2] Details of all analyses are available from the Research Branch.

TABLE 1

AVERAGE PERCENTAGE SCORES ON UKRAINIAN LANGUAGE TESTS FOR STUDENTS IN GRADE ONE*

Test	(N)	Average Score
Vocabulary Identification	(84)	74%
Oral Vocabulary	(84)	28%
Directions	(84)	43%
Comprehension	(84)	32%

*Scores for individual subtests are presented in Appendix B, Table B.1.

TABLE 2

AVERAGE PERCENTAGE SCORES ON UKRAINIAN LANGUAGE TESTS FOR STUDENTS IN GRADE THREE**

Test	(N)	Average Score
Comprehension and Identification	(85)	63%
Reading	(83)	62%
Writing	(83)	34%
Oral Skills	(84)	74%

**Scores for individual subtests are presented in Appendix B, Table B.2.

TABLE 3

AVERAGE SCORES ON THE METROPOLITAN ACHIEVEMENT TEST - PRIMER LEVEL FOR PROGRAM AND CONTROL GROUPS OF STUDENTS IN GRADE ONE

Subtest	Type of Program (Average Scores)	
	Program	Control
Reading*	19.0	22.6
Language*	17.0	18.6

*Indicates a statistically significant difference between scores of students in the Program and scores of students in the control group.

TABLE 4

AVERAGE SCORES ON THE CANADIAN TEST OF BASIC SKILLS - LEVEL NINE FOR PROGRAM AND CONTROL GROUPS OF STUDENTS IN GRADE THREE

Subtest	Type of Program (Average Scores)	
	Program	Control
Vocabulary	15.6	14.6
Reading	28.4	26.1
Spelling	17.2	15.5
Capitalization	16.9	16.4
Punctuation*	19.3	15.2
Language Use	17.4	17.5

*Indicates a statistically significant difference between scores of students in the Program and scores of students in the control group.

IV. OBSERVATIONS

A. Analysis of students' Ukrainian language scores revealed that after four to five months in the Program, students could correctly identify about three-quarters of the words on which they were tested. However, vocabulary, directions, and comprehension skills were not as advanced as vocabulary identification skills. After approximately two and one-half years in the Program, students' were performing at about the 75% level on oral skills, and were developing reading and writing skills.

B. Analysis of students' English achievement scores revealed that, overall, after four months in the Program, students' language skills were not as advanced as those of students in the control group. However, by Grade Three, these differences seemed to have disappeared, with students in the Program performing at least as well as students in the control group on tests of English language skills.

V. CONCLUSIONS/IMPLICATIONS

A. Analysis of Grade One Ukrainian language skills revealed that students are developing an understanding of the language. When compared with the Kindergarten and Grade One results reported in the interim evaluation, students in Grade One (1981/82) performed at a level comparable to pretesting of students' skills during the fall of the Program, and at a level below that of students' skills at the end of one year in the Program. Thus, it is likely that by the end of the 1981/82 school year, students in Grade One will be performing at a level comparable to that of students who previously completed one year of the Program.

B. Analysis of Grade Three Ukrainian language skills revealed that students appeared to be continuing to develop oral, comprehension, identification, and reading skills. As well, students were beginning to develop writing skills in the Ukrainian language. If this level of achievement is satisfactory at this point in the Program, then it can be concluded that the English-Ukrainian Bilingual Program is achieving its stated objectives with respect to Ukrainian.

C. Although students in Grade One of the Program performed less well on tests of English language development than students in a regular program, these differences disappeared by Grade Three. Moreover, assessment of scores reported in the interim evaluation suggests that differences in language development should disappear by the end of Grade One. Therefore, it does not appear that participation in the Program hinders English language development by the end of the primary grades.

D. Overall, from the results of both the interim and final evaluations, it appears as though students in the English-Ukrainian Bilingual Program are developing English language arts skills at a level comparable to that displayed by students in the regular program, as well as learning the Ukrainian language.

APPENDIX A:

NUMBER OF STUDENTS
COMPLETING EACH CTBS SUBTEST

TABLE A.1

NUMBER OF STUDENTS IN THE PROGRAM AND CONTROL SAMPLES
FOR EACH SUBTEST OF THE CANADIAN TEST OF BASIC SKILLS - LEVEL NINE

Subtest	Type of Program					
	Program		Control		Total	
	(N)	%	(N)	%	(N)	%
Vocabulary	(86)	45	(105)	55	(191)	100
Reading	(87)	45	(105)	55	(192)	100
Spelling	(86)	45	(104)	55	(190)	100
Capitalization	(52)	49	(55)	51	(107)	100
Punctuation	(51)	49	(54)	51	(105)	100
Language Use	(51)	49	(55)	51	(106)	100

APPENDIX B:

SUBTEST SCORES ON
UKRAINIAN LANGUAGE TESTS

TABLE B.1

AVERAGE AND MAXIMUM POSSIBLE SCORES ON UKRAINIAN LANGUAGE TESTS
INDIVIDUAL SUBTESTS FOR STUDENTS IN GRADE ONE

Test Subtest	(N)	Average Score	Maximum Score Possible
Vocabulary Identification			
Nouns	(85)	14.7	20
Adverbs	(85)	.8	1
Adjectives	(85)	2.5	3
Verbs	(84)	4.2	6
Oral Vocabulary			
Nouns	(84)	5.7	15
Verbs	(84)	1.4	10
Directions	(84)	4.3	10
Comprehension	(84)	3.2	10

TABLE B.2

AVERAGE AND MAXIMUM POSSIBLE SCORES ON UKRAINIAN LANGUAGE TESTS
INDIVIDUAL SUBTESTS FOR STUDENTS IN GRADE THREE

Test Subtest	(N)	Average Score	Maximum Score Possible
Comprehension and Identification			
Identify beginning letters	(85)	8.1	12
Identify ending letters	(85)	2.4	6
Silent reading comprehension	(85)	3.6	6
Listening comprehension-story	(85)	3.7	5
Listening comprehension-riddles	(85)	3.1	4
Reading			
Sequencing	(84)	2.6	6
Synonyms	(84)	2.5	4
Antonyms	(84)	3.1	5
Same or different	(84)	2.5	4
Prepositions	(84)	2.2	3
Pronouns	(83)	2.1	3
Reading for detail	(84)	4.1	6
Reading for main idea	(84)	3.8	6
Writing			
Dictation-words	(84)	2.1	5
Dictation-sentences and phrases	(84)	1.4	6
Written comprehension	(83)	1.5	6
Description sentences	(83)	1.4	6
Completing sentences	(83)	3.4	6
Oral Skills			
Reading pronunciation	(84)	4.9	8
Reading intonation	(84)	7.4	8
Response to pictures	(84)	6.9	10